

AXIBLACK SERIES

AXIblackbipерfect

440-450 Wp

High performance bifacial solar module
108 halfcell, glass/glass, N-Type



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ENERGY *for a* BETTER WORLD

AXIworldblackbip perfect GXXL 430 - 450 Wp

Electrical data (at standard conditions (STC) irradiance 1000 W/m², spectrum AM 1.5 at a cell temperature of 25°C)

Type	AC-430TGB/108BB	AC-435TGB/108BB	AC-440TGB/108BB	AC-445TGB/108BB	AC-450TGB/108BB
Nominal output	430 Wp	435 Wp	440 Wp	445 Wp	450 Wp
Nominal voltage U_{mpp}	32.83 V	33.03 V	33.24 V	33.45 V	33.66 V
Nominal current I_{mpp}	13.10 A	13.17 A	13.24 A	13.31 A	13.38 A
Short circuit current I_{sc}	13.88 A	13.95 A	14.02 A	14.09 A	14.16 A
Open circuit voltage U_{oc}	39.44 V	39.64 V	39.84 V	40.04 V	40.24 V
Module conversion efficiency	22.02 %	22.28 %	22.53 %	22.79 %	23.04 %

at BNPI test conditions: irradiance frontside 1000 W/m², backside 135 W/m², with spectrum AM 1.5 at a cell temperature of 25°C

Nominal output P_{mpp}	474 Wp	480 Wp	485 Wp	491 Wp	496 Wp
Short circuit current I_{sc}	15.30 A	15.38 A	15.46 A	15.54 A	15.61 A
Open circuit voltage U_{oc}	39.44 V	39.64 V	39.84 V	40.04 V	40.24 V

Bifacial coefficients: ϕU_{oc} 0.98±5%; ϕI_{sc} 0.80±10%; ϕP_{mpp} 0.80±10%

Design

Frontside	2.0 mm low-reflection white glass
Backside	2.0 mm glass, cell spaces black
Cells	108 N-Type TOPCon bifacial high efficiency cells
Frame	1.18 inch (30 mm) black aluminium frame

Mechanical data

L x W x H	67.80 x 44.65 x 1.18 inch (1722 x 1134 x 30 mm)
Weight	52.47 lbs (23.8 kg) with frame

Mechanical load

Design load (pressure/suction) 75.3 PSF / 33.3 PSF *

Test load (pressure/suction) 113 PSF / 50 PSF *

* depending on the type of installation according to the installation instructions

Power connection

Socket	Protection Class IP68, 3 bypass diodes
Wire	47.24 inch, AWG 12
Plug-in system	Plug/socket IP68, Stäubli MC4-EVO 2A

Limit values

System voltage	1500 VDC (UL) 1500 VDC (IEC)
Module Fire Performance	TYPE 29 (UL 1703) or CLASS C (IEC 61730)
Protection class	C (UL790) / II

NOCT (nominal operating cell temperature)* 45°C +/-2K

Reverse current feed IR 30.0 A

Permissible operating temp. -40°C to 85°C / -40F to 185F

(No external voltages greater than V_o may be applied to the module)

* NOCT, irradiance 800 W/m²; AM 1.5; wind speed 1 m/s; Temperature 20°C

Temperature coefficients

Voltage U_{oc}	-0.28 %/K
Current I_{sc}	0.046 %/K
Output P_{mpp}	-0.31 %/K

Low-light performance without Bifacial-effect

(Example for AC-450TGB/108BB)

I-U characteristic curve	Current I_{pp}	Voltage U_{pp}
200 W/m²	2.73 A	32.39 V
400 W/m²	5.52 A	32.77 V
600 W/m²	8.24 A	33.02 V
800 W/m²	10.90 A	33.31 V
1000 W/m²	13.38 A	33.66 V

Packaging

Module pieces per pallet	36
Module pieces per HC-container	936

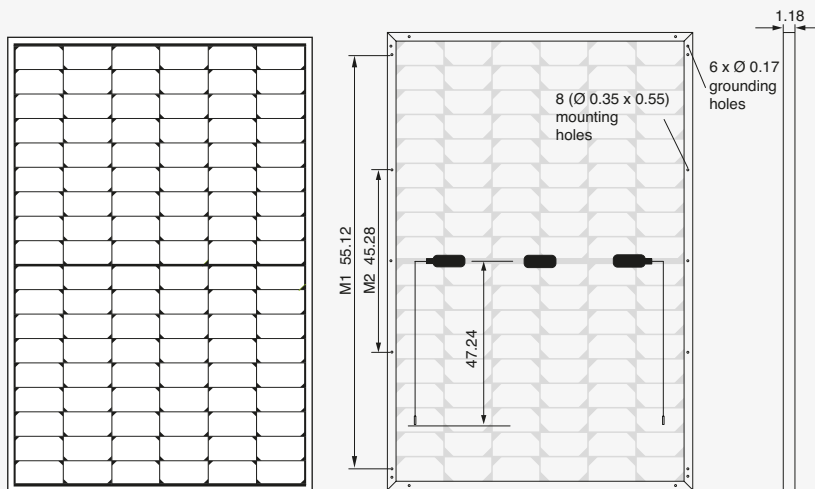


Fig. principle sketch

All dimensions in inch